

SESSION ONE: *STD among Tourists and Immigrant Workers*

Reappraisal of the problem of British mariners and sexually transmitted infection

A. B. CROSS AND J. R. W. HARRIS

St. Giles Hospital, London

Summary

A detailed appraisal of the British seafarer and his way of life is described and the prevailing management of sexually transmitted disease in the seafarer is outlined. It is shown that the available statistics on the incidence of sexually transmitted disease among seafarers are inadequate. Management at sea and ashore remains generally unsatisfactory.

Suggestions are made to improve the management of venereal disease in foreign ports and a simple method is described of managing sexually transmitted disease at sea with trimethoprim/sulphamethoxazole.

Introduction

Over the last decade the shipping industry throughout the world has undergone radical changes, many brought about by difficult economic conditions. These include changes in ship design, altered trading patterns, emergence of new maritime nations, and, notably, enlightened means of recruiting and caring for ships' complements. As the British mercantile marine has embraced many of these changes, it is considered that a reappraisal of the problem of sexually transmitted disease and the British seafarer is due. Furthermore, few statistics are available concerning venereal disease among British mariners.

Historical background

British medical authorities have long been concerned with venereal disease among seafarers. As early as 1665 the Admiralty, in their concern for the control of disease, paid a 15s. bounty to the surgeon for every case of venereal disease which he treated and cured,

while the sailor was fined (Allison, 1943). In 1795, Thomas Trotter, a naval surgeon, wrote to the Lords of the Admiralty expressing his disapproval both of fining the sailors and of paying a bounty to the surgeon. His argument was based on the following points:

- (1) In order to avoid fining, fellow crewmen on board ship undertook to 'cure' the disease.
- (2) Drugs were bought ashore for self-administration, some of which proved fatal.
- (3) Secret consultations by frightened mariners took place ashore. 'Some consult itinerant quacks who flock to the seaports, and had paid largely for their advice, while simple local complaints were converted into Lues.' '... several withheld knowledge from the surgeons' (Trotter, 1804).

His arguments must have been convincing as both practices were soon discontinued. A further interesting point which he makes is that at that time few or no venereal complaints presented on ships engaged on the East and West India services. A century later the medical profession was still concerned about venereal disease and seafarers. Oliver (1904), in his textbook 'Dangerous Trades', stated, in a chapter on seafarers, that alcoholism and venereal disease were prevalent, being caused 'by the habits of the seamen'. He suggested the formation of associations to protect the sailor from such temptations.

Forty years later, Hutchison (1943), over a 2-year period during the second world war, while treating merchant seamen on ships in the Clyde anchorages, found that 10.1 per cent. (542 cases) of incapacitating diseases were due to venereal infections. He added that this figure was an underestimate as it did not include all cases which occurred in the period.

Willcox (1954), in the period 1948/1949, carried out a survey in six British ports and six inland cities with similar populations, and found that the incidence of primary syphilis in the six ports was more than double that in the inland cities.

Schofield (1964) investigated the treatment of mariners who suffered from urethritis before attending a special clinic. Over a 3-year period, 429 mariners with symptoms of urethritis attended two port clinics in the north-east of England. Of these, 107 (25 per cent.) admitted to prior treatment, 84 having been treated on board ship. It was notable that by the end of the 3-year survey the number of mariners treated at sea had increased, and that 94 had received various doses of antitreponemal drugs. Another significant finding was that the younger the seafarer the more likely he was to have sought and obtained prior treatment.

Schofield (1965), writing on the likely source of infection of 269 mariners seen at the same two port clinics, revealed that for 124 men (46.1 per cent.) the contact was in the United Kingdom, and in only 71 cases (26.4 per cent.) was it outside Europe. Before considering the problem of sexually transmitted disease among British seafarers, the life of the modern mariner and the advances in maritime transportation must be appreciated.

British registered vessels (Figure)

In July, 1974, the number of foreign-going British registered ships was 1,362 (Chamber of Shipping UK, 1975), and for the purposes of this article these vessels can be grouped into four categories. Home

trade ships, *i.e.* those trading round United Kingdom ports and visiting the Continent between the Elbe and Brest, are not included.

(1) Passenger liners

The number of British registered passenger liners has fallen from 59 in 1969 to 28 in 1974. The pattern of traffic has also changed radically from scheduled voyages to relatively short cruises designed to provide maximum facilities for non-stop pleasure. Holiday-makers on cruises are often in the younger age group and include many young unaccompanied females. Passenger ships are the only vessels that must legally carry a ship's surgeon, so that venereal disease among the crews of such ships should be adequately managed.

(2) Bulk carriers and tankers

Although the number of British bulk carriers and tankers remains constant, their tonnage has doubled since 1969 as the size of the ships has increased to reduce running costs. There are 649 of these ships under British registration. Their voyages are long with few ports of call; for example, tankers frequently sail non-stop from the Persian Gulf to Europe. Many ports of call are in remote areas. Although tankers do not usually stay long in port, bulk carriers sometimes do so.

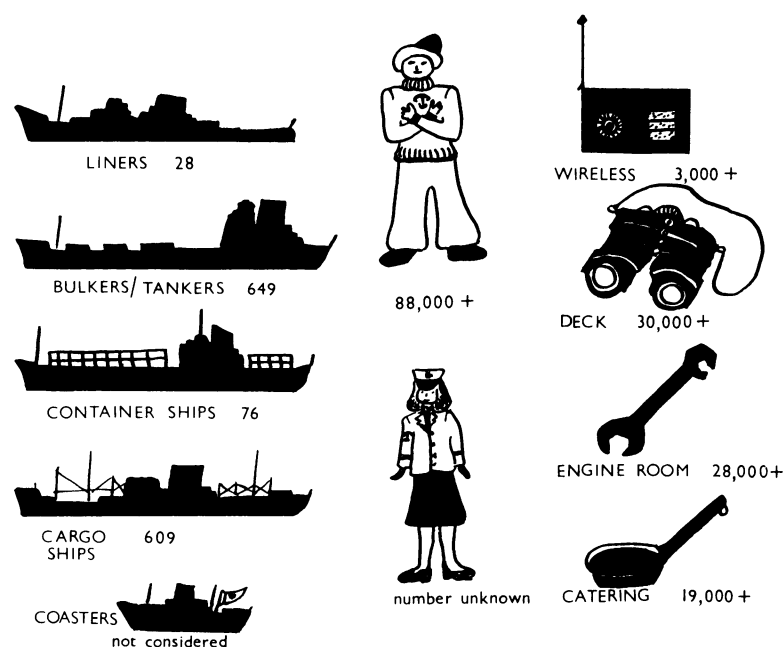


FIGURE Numbers of British registered ships, crew personnel, and occupations at sea

(3) *Container ships*

This type of cargo ship has only been developed in the last decade and there are now 76 under British registration. They are usually large and fast, making scheduled voyages with a quick turn-round at each port. Well equipped and with many amenities, they are popular with crews although the work is hard and there is usually little opportunity for the crew to go ashore.

(4) *General cargo ships and tramps*

The size of such ships has not increased greatly although with automation the crews have become smaller. There are now 609 on the British register. These ships go wherever cargoes are available and during a voyage may visit many ports and remain there longer than vessels of any other class.

The British mariner (Figure)

There are at present 88,544 registered merchant seamen (General Council of British Shipping, March, 1975). The wide range of occupations at sea falls conveniently into four groups:

(1) *Deck department*—30,710 registered personnel
Men in this group go to sea when young, and make a career of the merchant service. In fact their highly specialized technical training makes it difficult for them to obtain comparable employment ashore, should they decide to leave the sea.

(2) *Engine-room personnel*—28,565

The majority of these men must first serve a basic apprenticeship ashore, so that they are older when they first go to sea. Few now intend making a career of the sea and a large number leave after they have fulfilled their ambition to 'see the world'.

(3) *Catering Department*—19,185

This category now forms a large section of the ratings on merchant ships. The calibre of man in this group is the most variable; many of the duties require little skill, and the nature of some of their work attracts homosexuals. Until recently it was generally believed that the homosexual felt safer and was happier at sea where he was unlikely to come into conflict with the law.

(4) *Wireless operators*—3,084

After a training ashore these men are usually in sole charge of their own department. They therefore tend to be individualists. In the majority of cases they are contracted to the shipping company through specialist organizations.

Medical personnel at sea

It has been estimated that at any one time there are only between twenty and thirty medical officers practising as full-time surgeons on British ships

(Watson, 1975). Virtually all are employed on passenger liners. The 15.6 per cent. of British mariners engaged in the passenger trade thus represent the only section covered by medical officer care at sea. A decade ago one large British owner with over fifty ships was unique in that he tried to include either a medical officer or a male nurse in the complement of every ship, although he was not obliged to do so by law. However, at present this Company employs only ten sea-going male nurses, although there are still over fifty ships in the fleet.

Women at sea

Women are increasingly being employed on British merchant ships other than passenger liners; this has been common practice for some years on Scandinavian ships. At least one British company is now accepting female deck officer cadets. Families are now allowed to accompany the mariner on voyages, and this means that there are more women on board ship than in former years.

Terms of service

Although it is usual for the crew to sign 2-year articles, the average voyage now lasts less than 6 months, thus allowing the mariner more time at home with his family. Gross salaries are comparable to, if not higher than, those for similar shore occupations, and in addition basic salaries for ratings are greatly enhanced by readily available overtime. Accommodation on modern ships is excellent, with single cabins for each member of the crew, and efforts are made to occupy leisure time at sea with good library facilities, frequent film shows, etc.

Ships' complements

The average complement of a British passenger ship is now 310, while for other categories of vessel it averages forty (British Shipping Federation, 1974). It is therefore neither a legal requirement nor an economic proposition to carry full-time medical personnel on ships other than passenger vessels.

The customary practice of crews joining their ships in British ports and returning again to these same ports after long voyages has altered.

Fewer ships now trade on the old regular runs to selected ports, the practice of changing crews has become common, and many crews now fly out to join their ships at overseas ports and fly back again to Britain at the end of the voyage. For instance, a questionnaire sent to selected shipping companies revealed that as many crews now join their ships overseas as join them in home ports.

The management of venereal disease among ships' crews

Once the seafarer has joined ship, his health is the

responsibility of the ship owner and remains so until he signs off ship's articles. Should the sailor be unable to continue a voyage owing to ill health, the company is obliged to repatriate him. Medical facilities at sea differ from those ashore.

A. At sea

In ships without medical personnel (the vast majority), health and hygiene are the designated responsibility of one of the ship's officers. Senior deck officers are required, before obtaining their certificates, to undergo a course of instruction designed to cope with medical problems at sea. This course is held for the whole of the United Kingdom in Liverpool, and includes lectures on sexually transmitted diseases (Alergant, 1975). Nevertheless, mariners generally do not like dealing with medical problems and certainly not with infectious diseases.

On British merchant ships, the 'Ship Captain's Medical Guide' (Department of Trade and Industry, 1973), is a legal requirement, and at sea this is the book the designated officer should study when dealing with sexually transmitted disease. The subject is covered in seven pages. After a short section on prevention and the availability of port treatment centres, the diseases are classified under three headings, *viz.* gonorrhoea (with notes on non-gonococcal urethritis), chancroid, and syphilis. In each case the signs and symptoms are adequately described with a brief note on some of the complications. A primary chancre and chancroid are illustrated in colour. Management is described as summarized below:

(1) *Gonorrhoea* After ascertaining that the patient has a urethral discharge, a smear should be made on a slide using a clean match-stick. Next, instructions are given to determine whether or not the patient has a history of drug sensitivity, especially to penicillin. Two alternative treatments are then described:

- (a) An injection of four ampoules of standard ship's penicillin. This is not to be repeated. The total dosage of penicillin is 1.2 mega units procaine penicillin, and 400,000 i.u. benzyl penicillin.
- (b) The alternative is 250 mg. tetracycline four times daily for 5 days.

The final instruction on the management of gonorrhoea is that the patient must be referred, with his slide, to a clinic on arrival at the next port.

(2) *Chancroid* The treatment suggested for chancroid or any ulcer of the genitalia, is saline washes followed by the application of a saline-soaked gauze dressing. No ointments should be applied. An initial dose of three tablets of sulphamethoxypyridazine (1.5 g.) should be given, followed by one tablet daily for 9 days. The patient should be referred to a special clinic at the next port of call.

It is worth mentioning that it is emphasized five times that, should a sexually transmitted disease be suspected or diagnosed, the patient must seek specialist advice on arrival in port.

B. In port

On arrival in port, the mariner who has, or suspects that he has, contracted a sexually transmitted disease may obtain treatment in one of four ways (Table I).

TABLE I *Sources of treatment at ports*

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|------------------------------------------------------|
| 1. Referral to company medical officer |
| 2. Attendance at special clinic |
| 3. Mariner's selection of a private practitioner |
| 4. Self-medication with antibiotics purchased ashore |

(1) *Through the company's medical officer* On arrival at a foreign port a sailor requiring medical treatment will be referred by the captain, through the ship's agent, to the company's medical officer. As the agent has intimate local knowledge this usually appears to the ship's master to be the most sensible procedure. The medical officer then decides whether to treat the patient himself or to refer him for specialist attention.

(2) *Direct referral to a clinic* Some enlightened captains may send the mariner direct to the port venereal disease clinic, or the man may make his own way there. However, it must be remembered that many ships remain in port for only a short time, or over holiday periods when it may be impossible to visit a clinic. Although the excellent and comprehensive World Health Organization Directory of Venereal Disease Treatment Centres at Ports (WHO, 1972) is obtainable, it is not carried on the majority of British ships.

(3) *Private consultations* A sailor wishing to keep the knowledge of his disease to himself will visit a medical practitioner privately (Idsoe and Guthe, 1963). In some large ports certain general practitioners become well known for their treatment of sexually transmitted disease among seamen and their patients pass this information to their colleagues.

(4) *Self-administration of antibiotics* In many ports of the world antibiotics are readily obtainable and mariners with previous venereal infections come to learn which drug has been used to treat them. It is therefore a simple matter for them to treat themselves in the manner they think appropriate.

C. Prophylaxis

(1) *Condoms* It is strongly recommended in the 'Ship Captain's Medical Guide' that a supply of condoms should be carried on every vessel and that they should be made available to those members of the crew who request them. However, there is no law requiring shipping companies to provide them, although the majority do carry supplies.

(2) *Chemical* The old 'Prophylactic Packet' containing an ointment of mercurous chloride and sulphathiazole is not usually carried, although kits will still be found in older ships.

(3) *Systemic* Although prophylaxis using systemic antibiotics has been tried in foreign fleets (Eagle, Gude, and Bechmann, 1949), the 'Ship Captain's Medical Guide' specifically condemns the practice.

Method of collecting data

There is a dearth of statistics on venereal disease among British mariners. Bearing in mind the changes that have recently taken place in the shipping industry, it was decided first to try to ascertain whether the majority of mariners contracting a venereal disease lived in the vicinity of port clinics. One large company provided their statistics and it was found that in a recent year ninety seagoing employees domiciled in the United Kingdom contracted a venereal infection. Of the total number it was found that 38 per cent. resided in a traditional British seaport or environs, 32 per cent. in the larger cities and towns, and 30 per cent. in the more rural areas. Assuming that many seafarers return home from foreign ports by air, it is postulated that a large number would not in fact be seen at a British sea port, and it was therefore decided to ask for data concerning British seafarers from clinics in selected overseas ports which were visited regularly by British ships. The response and data made available were variable. Finally, data for 1974 from four selected overseas ports were analysed and compared with those from a major British seaport; the results are presented below (Table II).

TABLE II *Visits by British mariners to special clinics at five selected ports, 1974*

Port	No. of mariners	Cases of syphilis	Sexually transmitted disease not found
Southampton	338 (11 female)	7	174
Rotterdam	57	3	18
Singapore	66	1	51
Hong Kong	23	0	16
Port Elizabeth	0	0	0

Southampton

Southampton was selected as it is the principal British liner terminal. Of 338 British seafarers seen at the clinic, including eleven women, 174 had no evidence of venereal disease, and had presented solely for check-up. Several others were referred by ship's surgeons, having already been treated at sea.

Rotterdam

Figures were obtained from two clinics in Rotterdam. Only 57 British seafarers were seen during the year,

and it is of interest that eighteen presented solely for check-up. Statistics on the number of ships visiting this port, and also Southampton, are irrelevant as many ships are those classified as engaged in home trade and therefore undertaking only short voyages.

Singapore

Although 1,080 British registered ships passed through this port in 1974, only 66 British mariners reported to the clinic during that year, and in only fifteen cases was any disease found.

Hong Kong

The figures given here were for British sailors seen at all the Social Hygiene Clinics. Of the 23 British mariners who attended during 1974 only seven had any disease. 389 British registered ships passed through the port that year.

Port Elizabeth

The clinic in this port, which is regularly visited by British ships, did not see a single British mariner during 1974.

Number of confirmed cases of syphilis

Among the 484 sailors seen at these five selected port clinics, there were only eleven cases of syphilis. All three cases seen in Rotterdam were infected in South America.

Cases of sexually transmitted disease reported to United Kingdom authorities

By contacting major shipping companies and other maritime sources, an attempt was made to determine the number of United Kingdom seafarers who had contracted a venereal disease during 1974 while overseas. Ship's captains are requested to report to the United Kingdom maritime authorities the number of seafarers referred ashore overseas for medical attention. However, there is no obligation for ship's masters or the ship owners to report these figures, nor to give the diagnosis. The usual diagnosis given in cases of sexually transmitted disease is 'genito-urinary disease'. The total number of cases of genito-urinary disease which we were able to collect was 972, but this figure is not complete and the diagnosis is likely to be inaccurate in many cases.

Discussion

A detailed analysis has been presented of current trends in the British shipping industry which the authors believe to be essential for a sound understanding of problems involved in providing adequate care for the British mariner at risk to venereal infection. The figure of 972 cases of sexually transmitted disease among the British seafarers in 1974 must be only a small percentage of the true figure.

Several European countries have attempted to discover the true incidence of venereal disease amongst their seafarers. In Poland, Tomaszunas (1962), using reports from designated ships officers, estimated that there were 137 infections per 1,000 mariners in 1960. The same author, in 1967, carried out a further survey based on the reports of ship's surgeons during 1963 to 1964, and found the infection rate to be 194 per 1,000 sailors. Further research is at present being conducted at the World Health Organization Pilot Health Centre for seafarers at Gdynia, Poland.

From Sweden, Aminoff, Berne, and Werner (1963) reported on data collected from 142 ships. From this they calculated that approximately 5,470 Swedish seafarers were treated for venereal infection on board their ships annually. This corresponded with an annual rate of infection of 230 per 1,000 seafarers. According to Breijer (1956) there were 170 venereal infections for every 1,000 Dutch seamen annually.

With three major European maritime nations producing figures of 230, 194, and 170 per 1,000 seamen, it seems reasonable to assume that a figure of 150 per 1,000 in British seamen is a minimum infection rate. As the British mercantile marine has approximately 88,000 registered mariners, the true number of cases may be over 13,000 a year. With no other British figures available, it seems reasonable to use this figure of 13,000 as a base line in considering the management of venereal disease among British seafarers.

The comparatively small number of seafarers seen at Rotterdam and Singapore is of particular significance. These ports are the largest in Europe and the Far East respectively, and it is unlikely that the British mariner attending the clinics in these ports would deceive the authorities as to his nationality or occupation. The total number of seafarers seen in the two ports was 123, of whom seventy had no evidence of sexually transmitted disease. It is possible that many of the seafarers visiting Rotterdam would, if homeward bound, wait until they reached the United Kingdom before seeking medical advice. In addition, many of the ships visiting Rotterdam operate only on the home-trade routes.

In Singapore, these criteria do not apply. It is known that 1,080 British registered ships visited this port in 1974, but only 66 British seafarers visited the special clinic. Assuming that an average British crew numbers only 45 and that possibly only half of each ship's complement is British, then over 24,000 visits were paid by British seafarers to the port of Singapore in 1974. Therefore it is difficult to accept that only 66 mariners sought advice on sexually transmitted disease at this port. Rajan (1974), reporting from Singapore, suggested that many British seafarers were probably seen outside the special clinic and the figures support this view.

In a survey of Polish ships compiled from the reports of ship's surgeons on 131 voyages to the Far East between 1963 and 1966, Tomaszunas (1967) revealed that there were 170 venereal infections among the ships' crews. Furthermore, Ratnatunga (1968), reporting from a port clinic in Colombo, found that, although British ships were the most frequent visitors, British mariners formed only 11 per cent. of patients (113 cases) seen at the clinic.

It seems logical to assume that the majority of British seafarers desiring advice regarding venereal infection do not go to special clinics overseas. The Southampton figures suggest that many do seek medical advice when they return to the United Kingdom.

Why are British seafarers reluctant to attend overseas clinics despite the efforts of the League of Nations (Brussels Agreement, 1924), and later of the World Health Organization (1958 and 1960) to provide a free specialist treatment in the majority of major ports? The primary obstacle is undoubtedly the inadequate referral system from ships. For obvious reasons the long-established methods of referring through the ship's agent would be difficult to change. However, if shipping companies (and ship's masters) were made more aware of the advantages of sending the sailor directly to the port special clinic, and providing the clinic is open at times compatible with the working of the ship, then this would possibly improve the situation.

For the individual wishing to go directly, information on the location of the special port clinic must be readily obtainable. Each ship should display this information together with the opening hours of the clinic. To rely on the port medical authorities concerned to post such information on the ship is unrealistic as many ships obtain medical clearance by radio and are not visited by port medical authorities. Much more use could be made of the World Directory of Venereal Disease Treatment Centres at Ports. It is suggested that consideration be given to making this a legal requirement on every British deep-sea merchant vessel. In addition, most major ports have British seafarers societies under the care of a British padre. These dedicated men, who are highly respected by the seafaring community, might well be one means of communicating information and the whereabouts of clinics to ships' crews.

At sea, despite the advice by the World Health Organization and that contained in the 'Ship Captain's Medical Guide', few urethral slides are ever made, drugs and their dosages vary alarmingly, and not all patients are referred to the clinic at the next port of call (Bjørnberg, Krook, and Atterland, 1963; Aminoff and others, 1963; Idsøe and Guthe, 1963; Schofield, 1965; Ratnatunga, 1968). This is not surprising as the patient relies on the ability of laymen whose knowledge of and interest in medicine is

limited. Although a few nations employ a large number of sea-going medical personnel, *e.g.* Poland has over 170 ships' doctors (Tomaszun, 1975), it is unlikely, and it is not justified on economic grounds, for the British mercantile marine to do likewise.

With the changing pattern of seafaring and the advances in chemotherapy over the last decade, it seems appropriate to revise the relevant pages of the 'Ship Captain's Medical Guide', and the author of the appropriate section has stated that this revision should be undertaken (King, 1975). Is it justifiable to continue prescribing penicillin for suspected venereal disease at sea, when safer drugs are available? Indeed, should one advocate that laymen give intramuscular injections when oral preparations are available? The treatment of venereal disease at sea should be made as simple as possible and it is suggested that standard kits containing dressings and a prescribed course of oral trimethoprim/sulphamethoxazole be carried on all ships. The kits would contain information on venereal infections with emphasis on the necessity of obtaining specialist advice at the next port of call, while pointing out that this treatment will not cure syphilis. With this regime, both gonorrhoea and chancroid will be treated, while syphilis will not be masked, and the simplified management would surely be appreciated by the average ship's officer.

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